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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/623,336	07/18/2003	Patrick W. Truitt	011579US3	3290

30031 7590 12/31/2009
PHILIPS INTELLECTUAL PROPERTY & STANDARDS
P.O. BOX 3001
BRIARCLIFF MANOR, NY 10510

EXAMINER

DIXON, ANNETTE FREDRICKA

ART UNIT	PAPER NUMBER
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3771

MAIL DATE	DELIVERY MODE
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12/31/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/623,336

Applicant(s)

TRUITT ET AL.

Examiner

Annette F. Dixon

Art Unit

3771

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period **will** apply and **will** expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply **will**, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 September 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15, 24 and 31-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15, 24, and 31-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

1. This Office Action is in response the amendment filed on September 25, 2009. Examiner acknowledges claims 1-15, 24, and 31-33 are pending, with claims 1, 8, 11, 24, and 32 having been currently amended, and claims 16-23 and 25-30 having been cancelled.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-4, 7-11, 13-15, and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by Pauly (5,741,123).

As to Claims 1, 2, 4, and 7, Pauly discloses a radial impeller (30, Figures 2 and 3), comprising a hub (38) attachable to a rotating shaft (16, Column 2, Lines 37-38); an impeller body (30) attached to the hub (38) and extending radially from the hub (38) to a perimeter of the impeller (the location of element 56) and having opposed radial faces; and a plurality of impeller blades (48) disposed on one face of the impeller body (30), each impeller blade (48) extending from a leading end (44) of the blade generally adjacent to the hub (38) toward a trailing end (56) generally at the perimeter of the impeller, wherein the plurality of impeller blades decrease in height from the leading end to the trailing end (as shown in Figure 3), wherein an inlet area is defined between each

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pair of adjacent blades (48_n and 48_{n+1}) generally adjacent to the hub (38), with each inlet area being defined as the area at the radius of the leading end (44) of the adjacent blade (48_n and 48_{n+1}) and the one face of the impeller body (30) and wherein an outlet area defined between the pair of adjacent blades (48_n and 48_{n+1}) as the area at the radius of the trailing end (56) of the (48_n and 48_{n+1}) and the one face of the impeller body (30) wherein each inlet area is substantially equal to each corresponding area for each of (48_n and 48_{n+1}). (Figures 2 and 3).

As to Claims 3 and 10, Pauly discloses an axially extending skirt (42) attached to the impeller body (30) on an opposite face. (Figure 3).

As to Claims 8, 9, 11, and 15, please see the rejection of claim 1. The difference between claims 8, 9, 11, and 15 and claim 1 is the incorporation of a housing having a gas inlet and gas outlet. Pauly discloses an impeller (30) mounted within a housing (28) having a gas inlet (34) and a gas outlet (via 32).

As to Claims 13 and 14, Pauly discloses the housing (28) having a gas inlet (34) that increases around the perimeter of the impeller where the height of the blades follows the contour of the housing. (Figure 1).

As to Claim 24, please see the rejection of claim 1. The difference between claim 24 and claim 1 is the incorporation of a source of gas. Pauly discloses the source of gas is air. (Figure 1).

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4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 5 and 12 rejected under 35 U.S.C. 103(a) as being unpatentable over Pauly (5,741,123) in view of Wassmann (3,751,179).

As to Claims 5 and 12, Pauly discloses the hub (38) for a radial impeller; yet does not expressly disclose the shape of the hub having a smooth outer surface that curves radially outlet toward the plurality of inlets. Wassmann teaches the hub (42) having a curved shape (40) attached thereto prior to the plurality of impeller blades for the purpose of providing a central structure by which the drive shaft and bearing sealing structure is attached to the impeller blades of the pump. (Column 2, Lines 60-67). In light of the relationship between the shape of the hub and the ability to receive the drive shaft for the impeller blades, it would have been an obvious matter of design choice to make the different portions of the hub of whatever form or shape was desired or expedient. A change in form or shape is generally recognized as being within the level of ordinary skill in the art, absent any showing of unexpected results. *In re Dailey et al.*, 149 USPQ 47. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the shape of the hub of Pauly to include a curved shape as taught by Wassmann as a shape that can effectively support the bearing and sealing structure of the impeller blades on to the drive shaft.

6. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pauly (5,741,123) in view of Cordts (5,224,823).

As to Claim 6, Pauly discloses an impeller made from a one-piece construction (Column 3, Lines 31-37); yet does not expressly disclose the one piece construction of the impeller to be made by injection molding. Cordts teaches impellers may be made of metal or plastics wherein the plastic materials may be made by injection molding or any other advantageous production methods without compromising the mechanical strength of the impeller. (Column 2, Lines 15-21). Therefore, it would have been obvious to one having ordinary skill in the art to modify the method of construction of the one piece impeller of Pauly, to be made by injection molding as taught by Cordts as an alternative material construction method.

7. Claims 31-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pauly (5,741,123) in view of Woodring et al. (6,543,449).

As to Claims 31-33, please see the rejection of claim 24. The difference between claims 31-33 and claim 24 is the incorporation of specific output ranges for flow from 10-150 liters per minute, output ranges for pressure from 10 to 65 cm of water, and a patient circuit. Woodring teaches a medical ventilator utilizing an impeller (74, 76, and 78) for a patient circuit (Figure 2, inspiratory line 28 and expiratory line 30) wherein the output flow ranges may be set between 3 and 140 liters per minute and the output pressure ranges may be set between 5 and 35 centimeters of water for the purpose of providing ventilation control consistent with the respiratory therapy needs of the patient.

(Column 10, Lines 20-26). Therefore, it would have been obvious to one having ordinary skill in the art to modify the impeller of Pauly to be utilized to provide the desired respiratory therapy treatments as taught by Woodring, to be ventilation flow and pressure consistent with respiratory therapy.

Response to Arguments

8. Applicant's arguments, filed September 25, 2009, with respect to the rejection(s) of claim(s) 1-33 under 103(a) as being unpatentable over Ruiz-Vela in view of Sheets have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Pauly (5,741,123).

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Thut (5,597,289), Blair et al. (4,502,837) disclose additional impellers having a plurality of impeller blades wherein the blades decrease in height from the leading end near the hub to the trailing end near the perimeter of the impeller.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Annette F. Dixon whose telephone number is (571) 272-3392. The examiner can normally be reached on Monday thru Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Justine Yu can be reached on (571) 272-4835. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Annette F Dixon
Examiner
Art Unit 3771

/Annette F Dixon/
Examiner, Art Unit 3771

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Primary Examiner, Art Unit 3771